Enclosure – Detailed Comments on the Section 404 Permit Application

Direct Impacts

Wetlands and Streams

The applicant is proposing to remove all economically-recoverable coal from the Amendment 4 areas. Proposed impacts for the Amendment 4 areas include 126,686 linear feet of headwater streams and 27.46 acres of wetlands for this expansion project. Currently permitted impacts from the Bear Run East Pit Amendments 1, 2 and 3 are within a portion of the same watersheds as the proposed impacts. For example, Buttermilk Creek, Black Creek-Brewer Ditch and Middle Fork Creek watersheds would be impacted by both projects. The Bear Run East Pit permit, issued October 2007, allows for impacts to 122,785 linear feet of stream and 61.6 acres of wetlands. In addition to our concerns regarding large-scale adverse impacts that would occur under the currently-proposed project, Peabody Midwest Mining, LLC (Peabody) is planning future mining activity in the watersheds. According to page 31 of the September 2010 Section 404 permit application, Peabody states that "over the next 20-30 years…an additional 400,000-500,000 linear feet of streams and 40-50 acres of wetlands could be impacted." According to Peabody, the majority of the additional future expansion area will be within the Middle Wabash-Busseron Creek watershed with the remainder in the Lower White River water watershed.

EPA maintains that the proposed project will result in a substantial and unacceptable impact to the White River, an aquatic resource of national importance (ARNI) and substantial impacts to the Middle Wabash-Busseron Creek watersheds. Large-scale obliteration of these critical headwater systems and associated wetlands will cut off their connectivity to downstream waters resulting in elimination of habitat diversity in the affected areas. Additionally, the following key natural processes will be disrupted: transport of organic matter (leaf litter and woody debris), flood water attenuation, maintenance of water quality and quantity, recycling nutrients, and support of biological processes and diversity in these areas. [2] Disruption of these important processes will likely have long lasting effects on hydrology, downstream water quality, stream geomorphology, food webs, biodiversity and habitat.

Indirect Impacts

Violations of State Water Quality Standards

As referenced in our letter of June 11, 2010, the 404(b)(1) Guidelines (Guidelines) state that "no discharge of dredged or fill material may be permitted if it causes or contributes…to violations of any applicable State water quality standards." [3] Revised documentation fails to clearly state

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[2] Gomi, T., Sidle, R.C. and Richardson, J.S. 2002. Understanding Processes and Downstream Linkages of Headwater Streams. *BioScience* 52 (10): 905-916.

[3] 40 CFR § 230.10(b)

how the applicant will avoid causing or contributing to violations. The applicant has stated that they will comply with the National Point Source Discharge Elimination System (NPDES) permit, State Water Quality Certification and general requirements of the Surface Mining Control and Reclamation Act (SMCRA) permit, but the Guidelines have an independent requirement to ensure applicable standards are being met. EPA believes that, given the size and scope of impacts associated with this project, the potential remains for the project to cause or contribute to water quality excursions related to total dissolved solids, pH and total iron.

One page 52 of the revised permit, it is stated that it is not anticipated that the activities in the proposed Bear Run permit will impact the Busseron Creek and White River watersheds given their large size. In order to demonstrate this, we recommend that monitoring data from the current mining operations be evaluated to determine compliance with water quality standards.

Cumulative Impacts

According to Peabody, Bear Run is slated to be the largest surface coal mine in the eastern United States, as documented in a Peabody press release dated April 15, 2009. [4]
As stated above, an additional 400,000-500,000 linear feet of streams and 40-50 acres of wetland will be impacted incrementally within the same watersheds. Peabody states, on page 52 of the application, that the White River and Busseron Creek are large watersheds and the mining activities are not anticipated to affect them. The affects of the Bear Run East Pit, Bear Run Amendment 4 and future mining activities in the Bear Run complex cannot be minimized by simply stating that the watersheds are large. Bear Run East Pit and Bear Run Amendment 4 would impact a combined total of 249,471 linear feet of stream and 89.06 acres of wetlands. This is a cumulative impact of, at minimum, 650,000 linear feet of stream and 130 acres of wetlands attributable to Peabody's operations today and its future operations.

We acknowledge that additional quantitative information about future wetland and streams was included in the revised permit application. However, cumulative impacts on water quality, hydrology, and aquatic habitat and diversity that will result from the impacts were not addressed. While it may be difficult to predict cumulative impacts, the applicant could provide comparable data from similar projects regarding direct, indirect and cumulative impacts to complete the cumulative impacts assessment needed for this project. Without a comprehensive assessment, we cannot determine the full extent of the impacts on the aquatic environment and compliance with the Guidelines.

Alternatives Analysis and Avoidance and Minimization

The alternatives analysis addresses alternative mining methods and sites, but EPA believes there are additional mining and best management practices that may further avoid and minimize

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[4] http://www.peabodyenergy.com/pdfs/Q109EarningsRel.pdf

impacts. There are two ways Peabody could consider avoiding and minimizing impacts to good quality aquatic resources in this project area: one is through the construction of sediment basins and spoil piles in upland areas instead of wetland or streams and another is to analyze all viable alternatives that avoid intermittent streams and good quality wetlands that would have little economic impact on Peabody's operation. For example, the applicant should avoid constructing sediment ponds and drainage control structures in streams 25NS1, 26NS1 in Area 1. This would eliminate impacts to 1,690 linear feet of natural intermittent streams. Avoidance of 18NS13-1, 18NS13-2 and 18NS13A in Area 2 should also be considered for avoidance of 2,358 linear feet of natural intermittent tributaries. Spoil placement in 9NS-13 in Area 3 should be eliminated to avoid an additional 844 linear feet of stream. Because there is currently inadequate information regarding the alternatives analysis and minimization, the Least Environmentally Damaging Practicable Alternative (LEDPA) has not been identified, as required by the Guidelines.

Stream and Wetland Mitigation

The mitigation plan has been improved by the addition of 60 acres of forested wetland and 18,100 linear feet of stream in the Buttermilk Creek watershed to account for temporal loss. However, at this time, EPA believes the mitigation plan is inadequate to offset the substantial aquatic environmental impacts associated with the proposed permit. As required by portions of the Guidelines regarding mitigation for unavoidable impacts, information such as cumulative impacts of past development on the environment, development trends, watershed impairment, habitat loss and conversion, temporal loss, and site conditions post mining. should be considered during the development of the mitigation plan.[5] While the on-site and off-site mitigation proposed are valuable components of the mitigation package, EPA continues to urge the applicant to pursue additional avoidance and minimization measures and enhance the mitigation package so that the severity of impacts (direct, indirect, and cumulative) is reduced to a point where the project will not likely result in significant degradation. We recommend that the applicant consider expanding its off-site mitigation on Buttermilk Creek or in another watershed proposed to be impacted by the project, such as the Pollard Ditch watershed.

Hydrology

The applicant needs to demonstrate that the reconstructed stream reaches will achieve and maintain their intended flow regime in light of current and future impacts in the same watersheds anticipated by Peabody. Appropriate hydrology also needs to be demonstrated in restored wetlands. We recommend this information be included in the Section 404 permit application.

Monitoring

We acknowledge that the applicant has added eight monitoring points over the proposed project area to better capture the physical, chemical and biological make-up of watersheds proposed to

[5] 40 CFR § 230.93(c)

be impacted. The data gathered and provided should guide the biological success criteria for the mitigation reaches.

While baseline data needs have been sufficiently addressed, Peabody needs to demonstrate, through existing (if adequate) or through collection of new data, the potential impacts to aquatic habitat and water quality downstream of the operation. It is unclear whether the applicant will continue to monitor biology along with water chemistry and physical habitat during mining on streams that are not proposed to be directly impacted and are downstream of the project site as recommended in our letters of May 21, 2010, and June 11, 2010. Monitoring during site preparation and active mining is important to determine whether the activities are impacting water quality, aquatic habitat and biological communities and necessary actions to remediate those impacts should they occur. The applicant should identify a set of permanent biological, chemical and physical monitoring locations directly downstream of areas proposed to be impacted in each watershed.

Adaptive Management Plan

There are many unknowns and uncertainties regarding how the project will affect the environment. To address the remaining uncertainties and provide corrective actions, we recommend that Peabody develop and submit to the Corps an Adaptive Management Plan (AMP). The plan should include a description of actions to be initiated when the Corps determines the mitigation is not developing as it should (based on information received in the monitoring reports or personal observations). The AMP should include action triggers that will indicate when the AMP is to be activated and specific actions and timelines for adaptive actions which would be implemented by Peabody following the approval of the Corps. Such actions may include revisions to grading and revegetation plans for reclaimed sites, modification of stormwater plans, providing supplemental mitigation, and other Best Management Practices.

Financial Assurances

Financial assurances must be addressed in a Section 404 context to achieve compliance with the Guidelines. According to SMCRA regulations, bond release occurs in phases. Sixty percent of the SMCRA bond is released when final grading of the area is complete, and topsoil and subsoil have been replaced and stabilized. It is highly unlikely that all onsite mitigation areas will even be constructed before the initial sixty percent of the bond is released. Furthermore, the bond release is not contingent upon the stream and wetland mitigation meeting performance criteria under Section 404 of the Clean Water Act at any phase. This does not ensure a high level of confidence that the compensatory mitigation project will be successfully completed in accordance with the applicable performance standards with sufficient financial assurances in place. [6] The applicant should demonstrate how the financial assurances provided per SMCRA are sufficient to cover Section 404 mitigation if an assurance is not provided specifically for that purpose.

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[6] 33 CFR 230.93(n)(1)

Long-Term Protection

The applicant has clearly stated the difficulties in providing long-term protection on the proposed mitigation areas not owned or controlled by the applicant. While EPA may agree to some mitigation credit for mitigation that is not protected long-term, the applicant should seek additional mitigation off-site which they can protect in perpetuity and include in the mitigation package. We support the latest draft of the Environmental Covenant submitted by the Corps to the applicant, which rejects most of the changes to that document proposed by the applicant.